

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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August 8, 2007

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TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor, Task Manager *W H W*

FROM: Peter Hess, Environmental Scientist III, Engineering, Team Lead *PHA by an*  
Wayne Western, Environmental Scientist III, Engineer, Bonding

RE: Construction of Substation Concrete Retaining Wall, Canyon Fuel Company, LLC, SUFCO Mine, C/041/0002, Task ID # 2834

## SUMMARY:

The Permittee submitted an application to the Division on July 26, 2007 which would allow the construction of a concrete retaining wall on the NE side of the main electrical substation. This wall will help stabilize approximately eighty feet of the ancillary road which provides access to the 300,000 gallon water tank on the hillside located above the Mine.

The wall will have a thickness of one foot, and additional strength will be added to the concrete by the utilization of steel reinforcing bars. The Permittee estimates that approximately sixty-one cubic yards of concrete will be utilized for the construction of the retaining wall footers and wall sections.

Two twelve foot chain link construction type gates will be installed on the west end of the retaining wall to prevent access to the substation by unqualified employees.

This proposal is a minor revision to the already constructed SUFCO Mine surface facilities.

## TECHNICAL ANALYSIS:

## OPERATION PLAN

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## MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

### Analysis:

The Permittee's application to permit the construction of a concrete retaining wall immediately NE of the main electrical substation facility was received in the Price Field Office on August 6, 2007. This permitting action has been identified as Task ID # 2834.

The construction of this facility will occur inside the current disturbed area acreage of the SUFCO Mine. This new facility will not require changes to the currently approved surface drainage control plan, nor will it be necessary to remove any vegetation or topsoil.

The retaining wall will consist of five steel reinforced concrete pours comprising sixty-one cubic yards of material. This wall will enhance the lateral stability of the primary road accessing the 300,000 gallon hillside water tank and other lesser facilities located on the east side of the SUFCO Mine disturbed area. This road is classified as primary as it will be retained as part of the post mining land use in the area. However, based upon the reclamation cost estimate provided as part of the Task ID # 2834 submittal for this facility, the retaining wall will be reclaimed as part of the Mine site disturbance.

The length of the retaining wall paralleling the primary road is designed at seventy feet. The wing wall which will be located on the east end of this structure will have a length of twenty-five feet. Two twelve foot chain link construction gates will prevent access to this high-voltage electrical installation by un-qualified personnel at the SUFCO Mine.

The five concrete pours making up the retaining wall will be reinforced with steel rebar in sizes #6, #7, and #9. Large concrete footers will lie perpendicular to the wall, providing additional strength for the retaining wall.

At the request of the Division, the Permittee provided four detail drawings of the various wall sections / footers, as well as a detail of the two gate chain link fence. These detail drawings are adequate to describe the proposed retaining wall, but are not felt as being necessary for inclusion in the mining and reclamation plan.

### Findings:

The minimum regulatory requirements of this section have been met.

## **MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

### **Analysis:**

#### **Mining Facilities Maps**

The Task ID # 2834 application contains revised PLATES 5-2A, DETAIL OF EAST SPRING CANYON SURFACE FACILITIES and 5-2B, EXTENDED EAST SPRING CANYON SURFACE FACILITIES. Both plates show the addition of the proposed retaining wall NE of the main electrical substation facility.

#### **Certification Requirements**

Both submitted PLATES 5-2A and 5-2B have been P.E. certified by Mr. John D. Byers, a Utah registered professional engineer and Manager of Technical Services for the Permittee.

## **RECLAMATION PLAN**

### **BONDING AND INSURANCE REQUIREMENTS**

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

### **Analysis:**

#### **Determination of Bond Amount**

The Division determined that the amount of bond posted is adequate to ensure that the Division could reclaim the site in the event of bond forfeiture. The Division adjusted the reclamation cost estimate based on the modifications to the lower substation and determined that \$2,631,000 in 2009 dollars was needed. The current bond is for \$4,439,000 and therefore adequate to cover the cost of reclamation.

### **Findings:**

The information provided in the proposed amendment is considered adequate to meet the requirements of this section.

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**RECOMMENDATION:**

Task ID# 2834, Construction of Substation Concrete Retaining Wall at the SUFCO Mine adjacent to the main electrical substation should be approved by the Division.

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